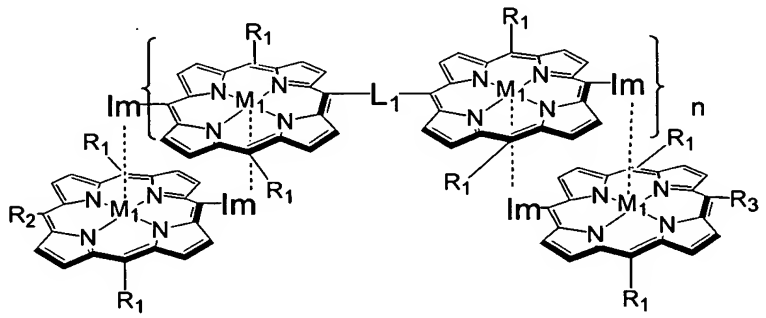
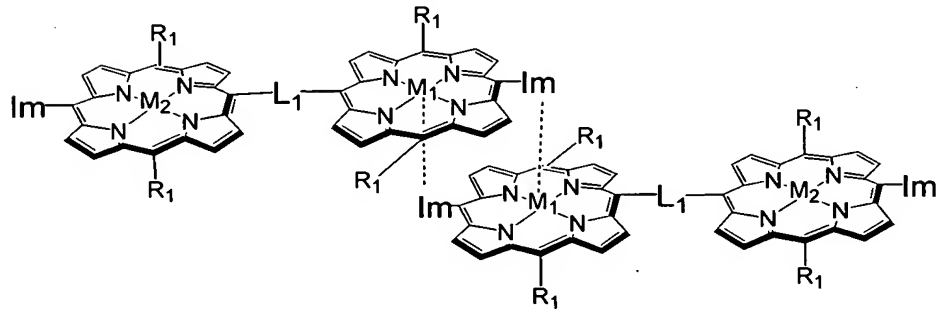
ABSTRACT OF THE DISCLOSURE

A porphyrin array exhibiting a large two-photon absorption property, and being linked with an acetylenic bond(s), represented by the following formulas:



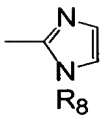
(1-1)

or

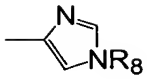


(1-2)

wherein R_1 represents an alkyl or aryl group, M_1 represents a metal ion capable of serving as a core metal and forming a coordinate bond with Im, M_2 represents two protons or a metal ion incapable of forming a coordinate bond with Im, R_2 and R_3 represent a group selected from a porphyrin residue or porphyrin metal complex residue, a cyclic diimide residue, a dialkylviologen residue, a benzoquinone residue, an N-methylpyrrolidine-fullerene derivative residue and a ferrocene residue, Im is represented by Im_1 or Im_2:



(Im_1)



(Im_2)

(R_8 represents methyl or H), L_1 represents $-(-C\equiv C-)_m-$ (m = 1 to 3); n represents an integer of 1 or more; R_9 represents one of R_1, R_2, R_3 and Im.